

Report of Horizontal Accuracy Testing of 4" Digital Orthophotos for Los Angeles Region Imagery Acquisition Consortium 3 (LAR-IAC3)

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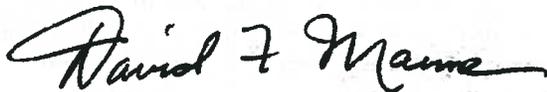
- References:
- FGDC Geospatial Positioning Accuracy Standards, Part 3: National Standard for Spatial Data Accuracy (NSSDA)
 - Quality Plan for Los Angeles Region Imagery Acquisition Consortium 3 (LAR-IAC3), Version 3.2, May 3, 2011

Reference a. Published in 1998, the NSSDA implements a statistical and testing methodology for estimating the positional accuracy of points on maps and in digital geospatial data, with respect to georeferenced ground positions of higher accuracy, reported at the 95% confidence level. The NSSDA replaces the 1947 National Map Accuracy Standard (NMAS) for digital geospatial data. The NMAS is applicable to graphic maps, as accuracy is defined by map scale. The NSSDA was developed to report accuracy of digital geospatial data that is not constrained by scale, to include digital orthophotos.

Reference b. LAR-IAC3's 4" digital orthophotos, produced by the Pictometry/Sanborn team, were tested in accordance with Acceptance Criteria listed in Reference b. The "georeferenced ground positions of higher accuracy," referred to generically as "QA/QC checkpoints," were provided by LAR-IAC with additional checkpoints surveyed by Towill, Inc. Each QA/QC checkpoint is a ground point feature that is well-defined and photo-identifiable on the digital orthophotos from which California State Plane Zone V coordinates were measured by Dewberry. Dewberry then determined the Δx and Δy differences in Eastings (x-coordinates) and Northings (y-coordinates) between the ground-surveyed QA/QC checkpoints and their coordinates extracted from the digital orthophotos. Dewberry then computed the root-mean-square-error (RMSE) statistics, including $RMSE_x$, $RMSE_y$, and $RMSE_r$. $RMSE_r$ is the radial statistic which equals the square root of $[RMSE_x^2 + RMSE_y^2]$. Finally, The NSSDA absolute accuracy statistic (Accuracy) is computed as $RMSE_r \times 1.7308$ in order to report the tested horizontal accuracy at the 95% confidence level as required by Reference a.

Criteria for 4-inch GSD Imagery	Acceptance Criteria	Tested
$RMSE_x$ (acceptance criteria 30)	1.00 ft	0.262 ft
$RMSE_y$ (acceptance criteria 30)	1.00 ft	0.341 ft
$RMSE_r$ (acceptance criteria 30)	1.41 ft	0.429 ft
Accuracy _r (acceptance criteria 31)	2.50 ft	0.743 ft
Aerial Triangulation Block(s) used	N/A	27
Number of QA/QC checkpoints used	N/A	126

Tested 0.7433 feet horizontal accuracy at 95% confidence level.



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